

Name: _____ Date: _____

Measuring with SOUND



1. You have 4 straws. Your challenge is to cut them so that you have 7 straws of different lengths with no pieces left over.

Trace and Measure Your Straws Below ↗

2.

3. Cut a piece of tape 12cm long. Lay your straws on the tape with the longest straw at one end and the shortest straw at the other. Put tape across the top.



4. Blow across the tops of the straws. Listen to sounds.

Measure straw with highest note _____ cm
Measure straw with lowest note _____ cm



5. Measure the straws in order from highest pitch sound to lowest pitch sound. Record measurements below.

cm	cm	cm	cm	cm	cm	cm
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Highest Pitch
→
Lowest Pitch



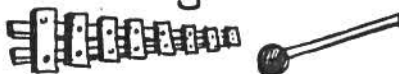
SOUND

Waves A wave carries energy from one place to another. A wave does not carry material. Sound is energy made from vibrating objects. The mechanical energy of sound travels in waves as it moves through solids, liquids, and gases away from the vibrating object. Sound cannot travel through a vacuum.

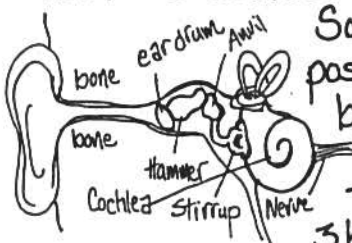
Vibration When you pluck the string of a guitar, the elastic wave travels to the end of the string and bounces to travel back and forth the full length of the string making a vibration. The wood begins to vibrate at the same rate, which causes the air to vibrate in sound waves that we can hear.



Pitch Pitch is the degree of highness or lowness of the sound as heard by the listener. An object that vibrates quickly has a higher pitch of sound as an object that vibrates slowly. Smaller objects vibrate faster than larger ones.



Loudness The loudness of sound is how strong the sound seems to us when it strikes our ears. Loud sounds have more energy than soft sounds. Waves spread out from the source in all directions like waves from a pebble in a pond. The loudness decreases as you get farther away from the source.



Sound is around us all the time. The air makes it possible for us to communicate with each other by speaking and hearing. The human ear has an ear drum which vibrates with sound waves. These vibrations cause vibrations in a chain of 3 bones the hammer, anvil and stirrup. The bones act like a lever so that the stirrup sends stronger vibrations to the cochlea. There is fluid inside the cochlea which vibrates and cells inside the cochlea change the vibrations to electric signals. These electric signals travel the auditory nerve to the brain. The brain interprets these signals as sound.

Read and take notes about the main idea and details in your reader's notebook.

Name _____

Date _____

Record your homework start time on the clock in Problem 6.

Directions: Use a number line to answer Problems 1 through 4.

1. Joy's mom begins walking at 4:12 p.m. She stops at 4:43 p.m. How many minutes does she walk?

Joy's mom walks for _____ minutes.

2. Cassie finishes softball practice at 3:52 p.m. after practicing for 30 minutes. What time does Cassie's practice start?

Cassie's practice starts at _____.

3. Jordie builds a model from 9:14 a.m. to 9:47 a.m. How many minutes does Jordie spend building his model?

Jordie builds for _____ minutes.

4. Cara finishes reading at 2:57 p.m. She reads for a total of 46 minutes. What time did Cara start reading?

Cara starts reading at _____ p.m.



Writing Assignment

For homework this week, you will need to write in your **writing journal**.

What will you write about? You may write about **any topic** that you interests you - fiction OR non fiction!

- * Find the **best place** to sit with your writing journal.
- * Think about **1 topic** that you have some ideas for. (fiction or non fiction)
- * Once you have **some ideas**, write for **15 minutes** in your journal.

Remember, **thinking** is a part of writing!